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PDF issue: 2026-11-28

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Ishiguro, Kaoru

(Citation)
Kobe University Economic Review,54:35-53

(Issue Date)
2008

(Resource Type)
departmental bulletin paper

(Version)
Version of Record

(JaLCDOI)
https://doi.org/10.24546/81000981

(URL)
https://hdl.handle.net/20.500.14094/81000981

KOBE UNIVERSITY

POLITICAL REFORM, INCENTIVES AND INTERNATIONAL INTERVENTION: AN INCOMPLETE CONTRACTS APPROACH*

***By* KAORU ISHIGURO**

The purpose of this paper is to examine the effects of the distribution of political authority and the intervention of the international community on the creation of incentives for political actors to carry out political reform in a post-conflict society. Our main conclusions are as follows. First, we should give political authority to political actors who have strong incentives to promote political reforms due to holding political authority. Second, the international community can promote effective political reform through appropriate intervention in the distribution of political authority.

1. Introduction

In the Dayton Peace Agreement of November 21 1995, Bosnians, Serbs and Croats in Bosnia and Herzegovina confirmed power sharing among three ethnic nations.[1)] Under the power sharing outlined in the Dayton Peace Agreement, the international community set up two political objectives: first, to prevent a recurrence of ethnic conflicts, and second to rebuild a multi-ethnic nation and democratize it.

For the first political objective regarding prevention of recurrence of ethnic conflicts, military power disputes have been restrained by NATO-led multi-national military units (IFOR: Peace Implementation Force, after 1997 SFOR: Peace Stabilization Force), and the aim has been achieved.[2)] The authority of the armed forces, however, remains decentralized among the three ethnic nations and is not integrated. Therefore, a dispute may recur by force of arms after withdrawal of a multi-national military unit. For the second political objective regarding the rebuilding and democratization of a multi-ethnic nation, the promulgation of a new constitution, a democratic election, the return of displaced persons and refugees, the protection of human rights, and the reform of justice and police were achieved. Under power sharing, however, each ethnic nation mutually vetoed reform efforts and the solutions of many problems were delayed.

How should the international community intervene in the distribution of political authority to promote political objectives and political reforms smoothly in post-conflict societies such as Bosnia and Herzegovina?[3)] The power sharing among ethnic nations realized by the Dayton Peace Agreement might be a necessary means to stop dispute by force of arms.

* This paper is a part of the research project of Grant-in-Aid for Scientific Research (Category (S) Project Number 17103002) .

1) See Szasz (1996), Holbrook (1998), Burg and Shoup (1999), Daalder (2000), Cousens and Carter (2001) and Bose (2002) for detail on the Dayton Peace Agreement.

2) Generally speaking, intervention of the international community succeeds in the prevention of a dispute recurrence (Fortna 2004).

3) The intervention of the international community in Bosnia and Herzegovina was initially planned to conclude in September 1996, but indefinite extension was decided at the Bonn meeting of December 1997. Afterwards it was altered to limited intervention to periods of seven or eight years at the Brussels meeting of February 2002.

However, power sharing may not always be effective in creating incentives for political reforms in post-conflict societies.

The purpose of this paper is to examine the effects of the distribution of political authority and the intervention of the international community on the promotion of incentives for political actors to carry out political reform in a post-conflict society. In particular, we examine how the distribution of political authority and the intervention of the international community influence the vested interests of political actors carrying out political reforms and the distribution of payoffs. We also examine what kind of influence they have on the incentives of political actors in charge of political reform.[4] An analytical feature of this paper is the use of an incomplete contracts approach in which the majority and the minority distribute payoffs through political bargaining; the majority in principal asking for political reform and the minority agent carrying it out.

Our main conclusions are as follows. First, when we assume that the political bargaining power of the minority carrying out political reform is given, there is a possibility that a problem of political under-reform (the holdup problem) will shrink incentives of the minority for political reform. Second, the influence that vested interests have on incentives of political reform is different depending on whether vested interests depend on political reform. Vested interests have influence on incentives for political reform, if they depend on political reform. Third, we should give political authority to a political actor who has strong incentives to promote political reforms due to holding political authority. Fourth, the international community can promote effective political reform through appropriate intervention in the distribution of political authority.

This paper is organized as follows. In Section 2, we set up a model of political reform using an incomplete contracts theory, and in Section 3, we explain political agreement and political reform using a complete contracts approach. In Section 4, we examine political bargaining power and incentives for political reform in an incomplete contracts approach. We analyze the influence that vested interests and the distribution of political authority have on political reform in Section 5, and examine the influence that the intervention of the international community have on political reform in Section 6. In Section 7, we examine power sharing in Bosnia and Herzegovina from the point of view of incentives and the efficiency of political reform, and in the final section we summarize some of the conclusions of this paper.

2. A Model of Political Reform

We set up a basic model of political reform. A feature of our model is the use of an incomplete contracts approach in which we assume a situation where political agreement

4) This is hardly a conventional approach to question of incentives for political reform of political actors in post-conflict societies. Paris (1997, 2002) shows the main point for peace building to be "strategic liberalization," but does not refer to incentives for political reform. Barnes (2001) and Wilde (2001) point out the importance of the problems of democracy and governance in post-conflict society, but do not thoroughly examine the problem of political reform.

regarding political reform is impossible.[5] In a complete contracts approach, the distribution of payoffs provided through political reform is determined by a prior "political agreement." In an incomplete contracts approach, however, they decide the distribution of payoffs through "political bargaining." The achievement of complete political agreements is difficult in political situations where each group is strictly opposed such as regional disputes. Accordingly, an incomplete contracts approach is more realistic than a complete contracts approach.

An incompletely contracted situation is assumed to describe a situation where even if a political agreement is concluded, it cannot realize benefits at an efficient level. The reason why a political agreement is incomplete is that the contracting parties incur large transaction costs in making, concluding and enforcing a complete contract due to the high political uncertainty associated with the future.[6] In the case that they cannot conclude a complete political agreement, an incomplete contracts approach examines how law, institution and intervention of the international community complement such a political agreement.

Actors: Suppose that there are three actors, "the majority," "the minority" and "international community." The majority is a principal asking for political reform and the minority is an agent carrying it out. Both the majority and the minority aim at maximizing their political payoffs, and they are risk neutral. Here, it is not important to distinguish between the majority and the minority, but rather important to distinguish between a principal (the majority) asking for political reform and an agent (the minority) enforcing it. The purpose of the international community is to design a system, or to design the distribution of political authority so that the minority efficiently carries out political reform.

Actions: We assume that the three actors have actions as follows. In this game, the minority and the international community have one chance to move respectively. The minority decides how much political reform it carries out at date 1. The international community decides whether to intervene in the distribution of political authority between the majority and the minority at date 0. The international community affects the incentives of the minority for carrying out political reform through its influence on the distribution of political authority. The majority does not have a decision-making opportunity, but distributes payoffs with the minority depending on political bargaining power at date 2.

The political reforms that the minority carries out, for example, include constitutional establishment and revision that relate to the minority's collective rights, its territorial autonomy, and its freedom of speech, expression, education, religion and association. In addition, political reforms determine the ratio between ethnic groups of Diet members, cabinet ministers, important posts in government, judges, armed forces, police officers and public employees, as well as budget distribution in public policy and the taxation system. The political reform has national and social-specific characteristics and cannot be transferred to other nations and societies. Therefore, it is assumed that political reform is similar to the relation-specific investment (specificity in human assets) examined in economics.

Payoffs: The minority realizes political value Π through carrying out political reform

5) The incomplete contracts approach is one of the rational choice theories. See Hart (1995), Che and Hausch (1999), Maskin and Tirole (1999) and Tirole (1999) for details on the incomplete contracts approach.
6) See Dixit (1996) for political analysis using transaction costs.

r. The minority then bears cost $C(r)$ of political reform. Political value Π is distributed between the majority and the minority depending on the vested interests of the majority M, the vested interests of the minority N, the political bargaining power (p, 1– p) of the minority and the majority, the distribution of political authority Φ and the intervention of international community Θ. The payoffs of the majority Π_M and the minority Π_N are expressed as follows:

$$\Pi_j = \Pi_j(\Pi(r), j, p, \Phi, \Theta)\ j = M,N, \tag{1}$$

where $\Pi' \equiv \partial\Pi(r)/\partial r > 0$, $\partial^2\Pi(r)/\partial r^2 < 0$, $C' = \partial C(r)/\partial r > 0$, $\partial^2 C(r)/\partial r^2 > 0$. The payoff of the international community is assumed to be the largest when efficient political reform is carried out.

Timing and Information Structure: This political reform develops over three stages as follows (see FIGURE 1).

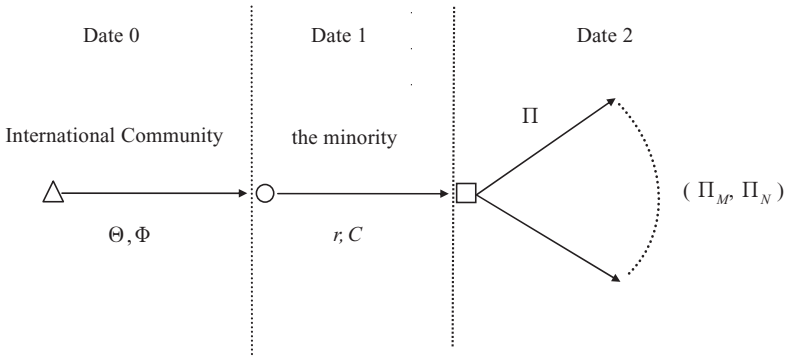


FIGURE 1. Timing in Political Reform

Date 0: The international community decides whether to intervene in the distribution of political authority Φ between the majority and the minority.

Date 1: The minority decides a level of political reform r. The minority decides the optimal level of political reform r while considering the costs $C(r)$ and payoffs Π_N of political reform.

Date 2: As a result of the political reform carried out by the minority in the previous period, political value $\Pi(r)$ is realized in this period. This political value $\Pi(r)$ is distributed between the minority and the majority depending on political bargaining power (p, 1– p). Whether the minority carries out efficient political reform becomes an important issues for the majority (principal).[7)]

Both the majority and the minority have common knowledge regarding the situation stated above and there is no incompleteness or imperfectness of information.

7) Although we do not argue the problem here, the kind of political reform that is carried out is also an important issue for the majority.

3. Political Agreement and Political Reform: Complete Contracts Approach

We will explain the complete contract approach before examining the incomplete contracts approach. If a fully equipped political agreement is possible, the majority, which is the principal of political reform, can let the minority enforce the efficient political reform by concluding a political agreement that gives an appropriate political reward to the minority, who is the agent.

The efficient political reform r^* is defined as follows:

$$r^* = \arg\max_r \Pi(r) - C(r). \tag{2}$$

The efficient political reform r^* is determined at the point where marginal benefit $\Pi'(r)$ and marginal cost $C'(r)$ are equal.

$$\Pi'(r^*) = C'(r^*). \tag{3}$$

Here, the efficient political reform r^* is achieved if they can conclude the following political agreement regarding a political reward T. It will be assumed that the majority has political bargaining power. Then the majority proposes a political agreement such as (4). If the minority carries out the efficient political reform r^*, the majority pays a political reward T equivalent to the cost $C(r^*)$ of the political reform that the minority bears. Otherwise, the majority pays nothing.

$$T = \begin{cases} C(r^*) & \text{if } r = r^*, \\ 0 & \text{otherwise} \end{cases} \tag{4}$$

Then, if the minority carries out an inefficient political reform ($r \neq r^*$), the payoffs become negative ($-C(r) < 0$). If the minority carries out an efficient political reform r^*, the payoff does not become negative. Therefore, the minority accepts the political agreement. The majority obtains all political value ($\Pi(r^*) - T$)) except for the political reward T which is paid to the minority. In this case, we suppose that the majority has political bargaining power of 100%, but this assumption is not always necessary.

It is difficult, however, for both parties to conclude such a political agreement in conflict societies where they are strictly opposed politically. Even if an agreement were concluded, many real political agreements would become incomplete. The reason is that as for political value Π, political reform r and political cost C, the parties incur large transaction costs when concluding a political agreement, that is observable, descriptive, verifiable and enforceable. Some of the roles of the international community are to reduce such transaction costs and to raise the possibility of achieving political agreements, but such attempts may not always succeed.[8] The Dayton Peace Agreement is one example of a political agreement that was

8) See Hartzell and Rothchild (1997) for political pacts after conflicts.

designed by the international community, but ultimately was incomplete and impossible to enforce.

4. Political Bargaining Power and Political Reform

In the incomplete contracts approach, the distribution of payoff between the majority and the minority is determined not by political agreement but by political negotiation. Then, the issue of which party has strong political bargaining power is an important issue for the determination of the distribution of payoffs. The distribution of payoffs decided through political negotiation influences the incentives of the political actors enforcing political reform.

4.1 Political Bargaining Power and the Distribution of Payoffs

It is the payoffs (vested interests) that are important in political negotiations; what are the payoffs (vested interests) that the negotiating parties obtain when negotiations break down? If the payoffs provided through political negotiation are less than vested interests, incentives for participation in political negotiations disappear. For example, vested interests in a multi-ethnic society seem to be territorial decentralization. Therefore, an objective of political negotiation is thought to be the distribution of political value in the central government.[9] It is assumed that each actor accepts the residual in addition to vested interests depending on political bargaining power p, and that each actor receives only vested interests when negotiations break down. We have military strength as one of the indexes of political bargaining power. According to the index, they share payoffs according to the probability of winning on the battlefield. Then the payoff of the majority Π_M and the payoff of the minority Π_N are the following:[10]

$$\Pi_M = (1-p)(\Pi - M - N)+M, \tag{5}$$

$$\Pi_N = p(\Pi - M - \mathrm{N})+N. \tag{6}$$

Therefore, the distribution of payoffs $\Pi_j (j=M,N)$ in political negotiations is determined by the political bargaining power (p, $1-p$) of the minority and the majority, and their vested interests M, N. The larger the bargaining power p and the vested interests N, the larger the payoff of the minority Π_N in political negotiations.

In the case where the political bargaining power of the majority is overwhelmingly large, p=0, the payoff of the majority Π_M is $\Pi - N$ and the payoff of the minority is N. Even if political bargaining power is overwhelmingly large, the majority cannot deprive the minority of its vested interests. If the majority encroaches upon the vested interests of the minority, the minority falls out of political negotiations and may appeal to armaments.

9) In the case of the multi-ethnic federalism of the second Yugoslavia, it is thought to be a relationship between territorial decentralization in each republic and a federal government (Sisk 1996, 71).
10) These payoffs are a "generalized Nash bargaining solution."

4.2 Political Bargaining Power and the Holdup Problem

We will examine what kind of influence political bargaining power p has on the distribution of payoffs and, as a result, what kind of influence it has on the political reform r carried out by the minority. Here, we prove the following proposition:

Proposition 1: *When we assume that the political bargaining power p(<1) of the minority carrying out political reforms is given, a problem of political under-reform (the holdup problem) may occur and reduce the incentives of the minority regarding political reforms.*

When the political bargaining power of the minority (p<1) is given, the political reform r_H is decided by the minority as follows:

$$r_H = \arg\max_r \; p[\Pi(r) - M - N] + N - C(r). \tag{7}$$

The first order condition that the political reform r_H maximizes the payoffs of the minority is expressed by (8).

$$p\Pi'(r_H) = C'(r_H). \tag{8}$$

According to the properties of the political value function $\Pi(r)$ and the cost function $C(r)$, the political reform r_H carried out by the minority is less efficient than the political reform r^* (see FIGURE 2).

$$r_H < r^*. \tag{9}$$

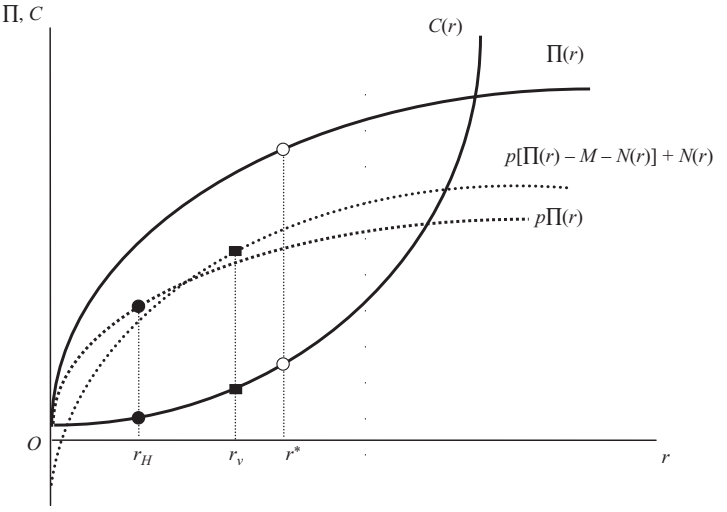


FIGURE 2. Political Reform and Political Value

In this way, the holdup problem occurs; this problem means that political reform is less than the efficient level because participants cannot conclude a complete political agreement. The holdup problem occurs for the following reasons. First, the minority cannot obtain part of the political value Π realized by political reform. The payoff of the minority is determined by the political bargaining power p (<1). The payoff affects the incentives of the minority. Second, political reform r is carried out before determining the distribution of payoffs. In our case, the political reform is carried out at date 1, and then the distribution of payoffs is determined at date 2. This sequence affects the incentives of the majority.

The first characteristic of the holdup problem is the problem of incentives for the minority carrying out political reform. The marginal political value realized by political reform is $\Pi'(r_H)$ and the marginal cost is $C'(r_H)$. Because $\Pi'(r_H) > C'(r_H)$, more political reform is socially desirable. However, the minority only obtains a portion of the increased political value $p\Pi'(r_H)$. Therefore, the minority does not carry out political reform until the socially desirable level r^* if $p\Pi'(r^*) < C'(r^*)$. The holdup problem cannot be resolved unless the minority carrying out political reform can obtain all of the increased political value, or in other words, the minority has political bargaining power of 100% (p=1). The holdup problem is considered as a problem of rational sabotage by the minority if we change our point of view.

The second characteristic of the holdup problem is related to the incentives for the majority asking for political reform. Too little political reform by the minority may be undesirable for the majority. If the majority proposes a distribution of payoffs that is profitable for the minority and promotes political reform, it may be able to obtain a more desirable result. The reason is that if political value Π is increased by the promotion of political reform, the payoff of the majority may increase even if the distribution of payoffs to the minority is increased.[11] However, the majority cannot propose a profitable distribution for the minority when a political agreement cannot be concluded. Even if it is assumed that a political agreement has been concluded, the majority will not have an incentive to make concessions to the minority in political negotiations that occur after political reform has been carried out.

The problem of incentives for the majority is related to a problem of commitment.[12] In the stage before the minority carries out political reform (the beginning of date 1), the majority has an incentive to offer a profitable distribution of payoffs to the minority. This offer allows the minority to promote political reform. However, it cannot let the minority promote political reform more, even if it changes distribution of payoffs at a stage (date 2) after the political reform has been carried out. Then, the majority does not in fact enforce the distribution of payoffs that it has offered to the minority; rather it will distribute payoffs to itself profitably. The minority does not promote political reform to expect such behavior from the majority. The minority should take account of such behavior by the majority. It is desirable to conclude a political agreement (a reliable commitment) beforehand, but it is difficult to do so in the case that contracts are incomplete. Because they cannot fully

11) In the case that the majority is a realist and is more concerned with relative payoffs than absolute payoffs, it may not be interested in efficient political reform.

12) The holdup problem, in other words, is a problem of whether a commitment for re-negotiations is possible. If re-negotiations are possible, the holdup problem occurs. See Maskin and Moore (1999) and Hart and Moore (1999).

conclude a complete political agreement, inefficiency of political reform occurs.

5. The Distribution of Political Authority and Political Reform

We have to examine the distribution of political authority and international interventions that have an influence on the incentives for political reform to deal with the holdup problem of too little political reform. Here, we will examine the influence that the distribution of political authority has on political reform. The distribution of political authority in political institutions such as a congress, government, a court of law, the armed forces and the police has an influence on the vested interests of the minority enforcing political reform.

5.1 Vested Interests and the Distribution of Payoffs

How should we create incentives for the minority to carry out political reform? In decisions on political reform, the size of the payoff that the minority can obtain in the political negotiation at date 2 is important. Through an incomplete contracts approach, we examine the following questions. What kind of influence do the distribution of political authority and international intervention have on vested interests? How does a change in vested interests affect the minorities payoff? How does a change in the payoff of the minority influence the incentive for political reform?

We will examine what kind of influence vested interests have on political reform before considering the influence that the distribution of political authority has on vested interests. Vested interests have an influence on the distribution of payoffs in political negotiations and, as a result, affect the incentives for political reform. Here, we prove the following proposition:

Proposition 2: *The influence that vested interests have on the incentives for political reform is different depending on whether vested interests depend on political reform. If vested interests depend on political reform, they have an influence on the incentives for political reform.*

1) A Case of Exogenous Vested Interests: In the case that vested interests do not depend on political reform, they do not affect the incentives of the minority carrying out political reform even if they change. The problem of the minority is expressed by (7). Then the realized political reform is r_H regardless of the size of vested interests N. However, if vested interests M^+ of the majority are large enough, as expressed by (10), the net payoff of the minority is negative with a level of r_H. In that case political reform is not carried out (r=0).

$$r = \begin{cases} r_H & \text{if } p[\Pi(r_H) - M^+ - N] + N - \mathrm{C}(r_H) \geqq 0\ , \\ 0 & \text{if } p[\Pi(r_H) - M^+ - N] + N - \mathrm{C}(r_H) < 0\ . \end{cases} \tag{10}$$

2) A Case of Endogenous Vested Interests: If vested interests N of the minority depend

on political reform r, they have an influence on the incentives for political reform. We can regard this case as a system designed to accord rational sabotage by the minority.

We assume that the minority can increase its payoff through increasing vested interests $N(r)$ as well as through increasing political value $\Pi(r)$ by means of political reform. For example, in a multi-ethnic society the enforcement of political reform in the central government increases the payoff for the ethnic nation itself, which enforces the political reform and the political value of the central government. Then the minority determines the level of political reform as follows:

$$r_v = \arg\max_r \; p[\Pi(r) - M - N(r)] + N(r) - C(r). \tag{11}$$

The first order condition that the political reform r_v maximizes the payoff of the minority is as follows:

$$p\Pi'(r_v) + (1-p)N'(r_v) = C'(r_v). \tag{12}$$

If political reform increases the vested interests of the minority ($N'(r_v) > 0$), the political reform r_v exceeds the political reform r_H, which is too small (see FIGURE 2 and FIGURE 3).

$$r_v > r_H. \tag{13}$$

Rearranging (12) yields

$$\Pi'(r_v)[p + (1-p)(N'(r_v)/\Pi'(r_v))] = C'(r_v).$$

Therefore, the relation between r_v and r^* is expressed by (14). If the political reform of the minority affects the vested interests N largely enough, the efficient political reform r^* can be realized.

$$r_v = \begin{cases} < r^* & \text{if } N'(r_v) < \Pi'(r_v), \\ \geqq r^* & \text{if } N'(r_v) \geqq \Pi'(r_v). \end{cases} \tag{14}$$

FIGURE 3 expresses the relationships among three political reforms: the efficient political reform (r^*), the political reform (r_H) in which vested interests are exogenous, and the political reform (r_v) in which vested interests are endogenous. The vertical axis expresses marginal benefits and marginal costs, and the horizontal axis political reform r. Each curve is linearized. As for the relation between r_v and r^*, we illustrate the case where $r_v < r^*$.

As discussed above, both the incentives of the minority carrying out political reform and total political value Π are different depending on how much the vested interests of the minority are affected by political reform. We can promote political reform if we can affect the vested interests of the minority effectively. The kind of method selected by the international community to control vested interests is important for determining the ability of

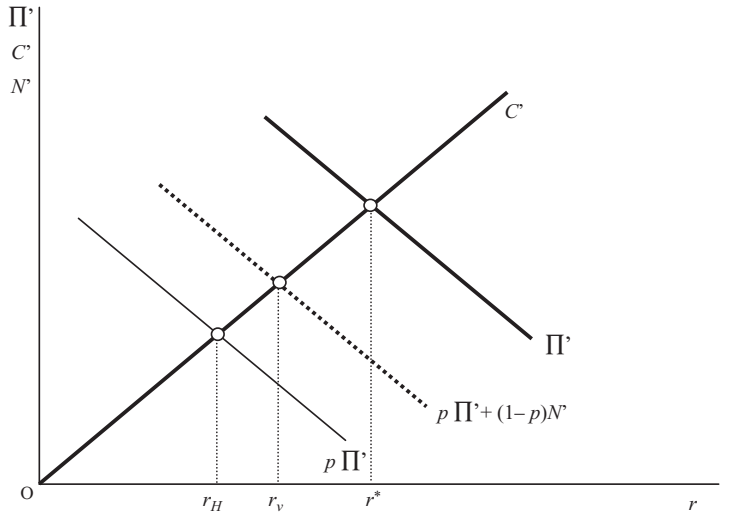


FIGURE 3. Vested Interests and Political reform

the minority to promote political reform in a post-conflict society.

5.2 The Distribution of Political Authority and Incentives of the Minority

We will examine the influence that the distribution of political authority has on incentives for political reform. Here, distribution of political authority means who holds legislative power, administrative power and judicial power.[13] An actor that has political authority has the power (veto) to refuse the decision of the other actor. If we take Bosnia and Herzegovina as an example, the problem is how to divide the political authority of the central government and autonomous government among Bosnians, Serbs and Croats. This leads to the problem of whether to give the autonomous government national sovereignty. When we aim at promoting political reform, what kind of distribution of political authority is desirable?

In general, the vested interests of the majority and the minority will be affected by the distribution of political authority. Then, we assume that $M=M(\Phi)$ and $N=N(r,\Phi)$. Φ denotes the distribution of political authority, and if it changes, vested interests are changed. Here for simplicity it is assumed that political reform r undertaken by the minority does not influence the vested interests of the majority. Then, the minority decides the level of political reform as follows:

$$r_{\Phi} = \arg\max_{r}\ p[\Pi(r) - M(\Phi) - N(r,\Phi)] + N(r,\Phi) - C(r). \tag{15}$$

The first order condition that the political reform r_{Φ} maximizes the payoff of the minority is

13) Distribution of political authority is equivalent to distribution of proprietary rights in economics. According to Grossman and Hart (1986) and Hart and Moore (1990), an actor that has proprietary rights has the power of decision over the material assets of the firm in economics.

as follows:

$$p\Pi'(r_\Phi) + (1-p)N'(r_\Phi,\Phi) = C'(r_\Phi). \tag{16}$$

Under a given distribution of political authority Φ, if political reform increases the vested interests of the minority ($N'(r_\Phi,\Phi) > 0$), the political reform r_Φ implemented by the minority exceeds the political reform r_H that is too little.

$$r_\Phi > r_H. \tag{17}$$

5.3 Three Types of Distribution of Political Authority

We examine three types of distributions for political authority: the majority has political authority, the minority has political authority, and power sharing between the majority and the minority. Here, we prove the following proposition:

Proposition 3: *We should give political authority to the political actor who has a strong incentive to promote political reforms due to its holding political authority.*

1) The Majority Holds Political Authority: Even if political negotiations breaks down, when the majority (principal) holds political authority ($\Phi=\Phi_M$), it can realize political value by using political authority. However, the minority cannot realize political value at all. Therefore, the vested interests of the minority are regarded as zero (N=0). Then the minority determines the level of political reform as follows:

$$r_{\Phi M} = \arg\max_r\ p[\Pi(r) - M(\Phi_M)] - C(r). \tag{18}$$

The first order condition that the political reform $r_{\Phi M}$ maximizes the payoff of the minority is as follows.

$$p\Pi'(r_{\Phi M}) = C'(r_{\Phi M}). \tag{19}$$

The political reform $r_{\Phi M}$ of the minority is the same as the political reform r_H, and the political reform $r_{\Phi M}$ becomes too small.

$$r_{\Phi M} = r_H. \tag{20}$$

2) The Minority Holds Political Authority: Even if political negotiation breaks down, when the minority (agent) has political authority ($\Phi=\Phi_N$), the minority can realize political value by using it. However, the majority cannot realize political value at all. Therefore, the vested interests of the majority are regarded as zero (M=0). Then the minority decides the level of political reform as follows:

$$r_{\Phi N} = \arg\max_r \; p[\Pi(r) - N(r,\Phi_N)] + N(r,\Phi_N) - C(r). \tag{21}$$

The first order condition that the political reform $r_{\Phi N}$ maximizes the payoff of the minority is as follows:

$$p\Pi'(r_{\Phi N}) + (1-p)N'(r_{\Phi N},\Phi_N) = C'(r_{\Phi N}). \tag{22}$$

If the political reform increases the vested interests of the minority ($N'(r_{\Phi N},\Phi_N) > 0$), the political reform $r_{\Phi N}$ of the minority exceeds the political reform r_H, and a problem of too little political reform is reduced.

$$r_{\Phi N} = r_v > r_H. \tag{23}$$

3) Power Sharing: In the case of joint decision making or power sharing ($\Phi=\Phi_s$) between the majority and the minority, when political negotiations break down both the majority and the minority cannot form political value.[14] The reason is that if a partner exercises a veto and does not give approval, both agents cannot carry out political reform and cannot realize political value.[15] Therefore, this is the same as the case where both sides do not have vested interests. The minority decides a level of political reform as follows:

$$r_{\Phi s} = \arg\max_r \; p\Pi(r) - C(r). \tag{24}$$

The first order condition that the political reform $r_{\Phi s}$ maximizes the payoff of the minority is as follows:

$$p\Pi'(r_{\Phi s}) = C'(r_{\Phi s}). \tag{25}$$

Under power sharing between the majority and the minority, the political reform $r_{\Phi s}$ of the minority becomes too small. Power sharing is a device that improves political fairness, but may reduce the efficiency of political reform.

$$r_{\Phi s} = r_H. \tag{26}$$

The distribution of political authority Φ between the majority and the minority affects the level of political reform r and the distribution of payoffs $\Pi_j(j=M,N)$. This is because the distribution of political authority Φ has an influence on vested interests N, M in political negotiations. In this case, we should give political authority to the political actor (agent) who

14) There are various forms of power sharing. For example, the majority has legislative power although the minority is in charge of the judicial power. There is not a single model regarding power sharing, but various methods, systems and mechanisms for ethnic conflict evasion have been examined (Sisk 1996, 116; Rothchild 2002).

15) Lijphart (1969, 1977, 1991) evaluates a mutual veto positively from the point of power sharing. In contrast, Kaldor (1999) and Kaufmann (1996) are critical of power sharing. The reasons are that power sharing causes strain by joining incompatible exclusions together and that even if power sharing is realized by intervention of international community, a dispute recurs after intervention.

has strong incentives to promote political reforms due to holding political authority. The relationship between the level of political reform r and the distribution of political authority Φ is as follows (see FIGURE 3):

$$r_{\Phi N} > r_{\Phi M} = r_{\Phi s}. \tag{27}$$

When the minority, who is the actor carrying out political reform, grasps political authority, the result (efficiency) of political reform is large. Political reform has national and social-specific characteristics. Then there is a possibility that if the minority cannot use the political system and mechanism by itself, it cannot realize political value even if it carries out political reform. Then, when the minority holds political authority, $N'(r_{\Phi},\Phi)$ becomes large. The vested interests of the minority grow largely due to the minority holding political authority. Therefore, for promotion of political reform, it is desirable to distribute as much political authority as possible to the minority who is in charge of political reform.

As discussed above, the distribution of political authority to the minority carrying out political reform is desirable for promoting the efficiency of political reform. However, it will actually be rare that such a distribution of political authority is enforced smoothly. The reason is that if the distribution of political authority changes, the political balance may be broken and a political fairness may be violated. As a result, a redistribution of political authority may lead to a dispute by force of arms just as has been seen with many ethnic conflicts. This is one of the reasons that intervention of the international community is necessary in post-conflict societies. In other words, the problem is to design a distribution of political authority that promotes efficient political reform while evading a dispute by force of arms.

6. Intervention of the International Community

Intervention of the international community has an influence on vested interests and the distribution of payoffs between the majority and the minority through its affect on the distribution of political authority, and has an influence on the incentives of political reform for the minority. Here, we prove the following proposition:

Proposition 4: *The international community can promote efficient political reform by means of appropriate intervention in the distribution of political authority.*

We assume that the vested interests of the majority and the minority are affected by intervention of the international community. This is a case in which the international

16) There are various forms of intervention by the international community in post-conflict societies (Fearon and Laitin 2004). Recent examples of territorial management by the United Nations include Cambodia, Kosovo and East Timor (Matheson 2001, Strohmeyer 2001). In Bosnia and Herzegovina, various international organizations such as OSCE, EU and NATO, besides the United Nations, participate. In cases in which the purpose of international intervention is to create a system of domestic peace, two incentive structures are important. One involves the rules of the game in domestic politics and the other the norms and rules of the international community. If set adequately, the rules of the game in domestic politics effectively reward inter-ethnic toleration, inclusivity, and a respect for rights (Sisk 1996, 92).

community intervenes in the distribution of local political authority Φ in territories administrated by it, for example, Bosnia and Herzegovina, Kosovo, Afghanistan and Iraq, and has an influence on vested interests.[16] We assume that $M=M(\Theta)$ and $N=N(r,\Theta)$, where $\Theta \in [0,\infty)$ expresses the intervention of the international community. This intervention changes the distribution of local political authority and affects the vested interests of the majority and the minority.[17] For simplicity, it is assumed that political reform r of the minority does not influence the vested interests M of the majority. Then the minority determines the level of political reform as follows:

$$r_\Theta = \arg\max_r \; p[\Pi(r) - M(\Theta) - N(r,\Theta)] + N(r,\Theta) - C(r). \tag{28}$$

The political reform r_Θ maximizing the payoff of the minority is determined to satisfy the following condition:

$$\Pi'(r_\Theta)[p+(1-p)(N'(r_\Theta,\Theta)/\Pi'(r_\Theta))] = C'(r_\Theta). \tag{29}$$

If the following condition is satisfied, r_Θ equals the efficient political reform r^*.

$$N'(r_\Theta,\Theta^*) = \Pi'(r_\Theta). \tag{30}$$

Θ^* expresses the level of intervention of the international community that enables efficient political reform. In other words, if the intervention of the international community is $\Theta=\Theta^*$, political reform is $r_\Theta = r^*$.

We assume that the international community adds a constraint to the distribution of political authority between the minority and the majority so that (30) is satisfied. For example, we assume the intervention condition for the international community given by (31). Then the international community does not intervene at all ($\Theta=0$) if efficient political reform is carried out. Otherwise, it intervenes in the distribution of political authority between the majority and the minority and their vested interests:

$$\Theta = \begin{cases} 0 & \text{if } r = r_\Theta, \\ \Theta^* & \text{otherwise} \end{cases} \tag{31}$$

The international community can realize efficient political reform through appropriate intervention in the distribution of political authority in this way. However, the intervention of the international community may sacrifice fairness between ethnic nations even if it achieves efficient political reform.

7. Power Sharing: A Case of Bosnia and Herzegovina

We examine power sharing in Bosnia and Herzegovina from a point of view of the

17) Generally $\Phi = \Phi(\Theta)$, however we specify $\Phi = \Theta$.

incentive and efficiency of political reform.

1) Power Sharing: In a multi-ethnic nation, under majority rule, the majority may monopolize political powers and remove the minority. Therefore, a simple majority rule is not appropriate. We must devise power sharing between ethnic groups under which the minority can participate in political decisions.

There is the "consociational" approach of Lijphart (1966, 1977, 1991) for power sharing in a multi-ethnic society.[18] This approach guarantees the minority access to political power, gives each ethnic-nation a high degree of autonomy and handles affairs of a state through cooperation between ethnic-nations. Four political principles are proposed in power sharing by the consociational approach (Lijphart 1977, 25-44). The first is the grand coalition where decision-making is not made by majority rule but by consensus among ethnic representatives. The second is the mutual veto which guarantees veto power to the minority. The third is proportionality which enforces a proportional principle between ethnic nations in the distribution of legislative seats and the budget. The fourth is ethnic autonomy where common problems are decided by consensus, but problems related to a single ethnicity are determined autonomously.

2) Bosnia and Herzegovina: Bosnia and Herzegovina and the Republic of Macedonia are among the various countries which realized power sharing in former the Yugoslavia area.[19] In these two countries, power sharing among ethnic nations was realized through political agreements among political parties after founding elections.

In the Republic of Bosnia, three nationalist parties agreed to a partnership after the founding election of November 1990 (Woodward 1995, 122). The trilateral power sharing agreement consisted of Bosnians, Serbs and Croats[20], and was maintained until October 1991. Important posts of the state were fairly assigned to each ethnic nation; the President was Bosniac, the Prime Minister was Croat and the Chair of the Diet was Serb. As for decision making, a consensus rule was adopted, not a majority rule. However, because Bosnians and Croats declared independence by majority rule when facing the issue of the independence of Bosnia in October 1991, the power sharing agreement collapsed.

After the November 1995 Dayton Agreement, Bosnia and Herzegovina enforced power sharing among ethnic nations again. Through the establishment of a political system (a constitution) after the Dayton Agreement, autonomy and the veto of the three nations of Bosnians, Serbs and Croats were institutionalized.[21] The central government consists of a Presidency and a Council of Ministers (a cabinet). The Presidency consists of three representatives of three nations, and the Council of Ministers consists of 12 representatives of

18) Besides the consociational approach, there is the "integrative" approach in power sharing (Sisk 1996, 34-40). This approach is aimed at restraining ethnic conflicts by forming multi-ethnic political organizations and political agreements in various areas as a means to promote cooperation among ethnic nations (Horowitz 1985). See McRae (1991) and Rothchild (2002) in addition to the above references on power sharing.

19) A historical example of power sharing among nations is the national federalism in the 1946 federal constitution of the second Yugoslavia (Ramet 1992, 19).

20) In 1991, Muslims were 43.7%, Serbs 31.4% and Croats 17.3% of the total population in Bosnia and Herzegovina (Woodward 2003, 33).

21) Bosnia and Herzegovina consists of the Serb "Republika of Srpska" and the Bosniac and Croat "Federation of Bosnia and Herzegovina". Each entity has powerful autonomy such as police authority and authority over the armed forces. As a result, the central government did not have a Ministry of Finance at first, and has limited authority. See the Constitution of Bosnia and Herzegovina (http://www.ohr.int/print/?content_id=372).

three nations. Veto was given to each nation on every council. The House of Representatives consists of 42 members in which each nation has 14 members, and the House of People consists of 15 delegates in which each nation has 5 members.

3) International Intervention: Power sharing in Bosnia and Herzegovina after the Dayton Agreement has not always worked effectively. Each nation has exercised its veto to protect its own ethnic interests, and has interfered with the proceedings of the administration. If each nation vetoes mutually, enforcement of efficient political reform is difficult. In this way, many political problems have been left unattended and unsolved.

To deal with such political difficulties, the OHR (the Office of the High Representative), who was in charge of the department of public welfare of the Dayton agreement, was given extremely strong authority during the Bonn meeting of the PIC (Peace Implementation Council) of December 1997[22]; this included legislative power and dismissal right in public employment (Knaus and Martin 2003). As for the recovery of peace and order, the maintenance of infrastructure, and the return of displaced persons and refugees after the Bosnian civil war, many areas were enforced through the strong power of OHR.

However, regarding the intervention of the international community, the OHR enforces strong state power with no change in the distribution of political authority among nations or the power sharing of the three nations.[23] Therefore, no nation has incentives for political reform in the central government, and therefore political reform and the resolution of political difficulties are inefficient. To promote political reform, we have to reexamine the devices for power sharing among ethnic nations.

8. Concluding Remarks

We have examined the effects of the distribution of political authority and the intervention of the international community on the creation of incentives for political actors carrying out political reform in a post-conflict society. Our main conclusions are as follows.

First, when we assume that the political bargaining power of the minority in charge of political reforms is given, there is a possibility that a problem of political under-reform (the holdup problem) may occur and reduce the incentives for the minority to carry out political reform. The holdup problem has a connection with the incentives of the majority and the minority.

Second, the influence that vested interests have on incentives for political reform is different depending on whether vested interests depend on political reform. Vested interests have an influence on incentives for political reform, if they depend on political reform. Then it is important to understand how to control the vested interests of the political actor carrying

22) PIC is the international council that was established in December 1995 to help enforce the peace agreement in Bosnia and Herzegovina. It consists of 13 international organizations such as the UN, the World Bank, OSCE and NATO, and 42 nations including the G8. At its Brussels meeting of February 2002, PIC concluded a simplification of peace enforcement systems and a time limit on intervention (http://www.ohr.int/?lang=en).

23) A reform bill regarding the Council of Ministers was approved in the House in April 2000, but the framework of power sharing among ethnic nations has not changed. At the Brussels meeting of PIC of May of the same year, expansion of the authority of the central government was proposed (Declaration of the PIC, May 24, 2000).

out political reform.

Third, we should give political authority to a political actor who has strong incentives to promote political reform due to its holding political authority. The vested interests of a political actor enforcing political reform increase substantially due to its hold on political authority. Therefore, for promotion of political reform, it is desirable to distribute more authority to the political actor carrying out political reform.

Fourth, the international community can promote efficient political reform by means of appropriate intervention in the distribution of political authority. In the case where political reform is inefficient, the international community can promote efficient political reform by intervening in the distribution of political authority and interfering with the vested interests of political actor.

Professor, Graduate School of Economics, Kobe University

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